

FAIRCHILD

A Schlumberger Company

FDH900/FDLL900

FDH999/FDLL999

High Speed Switching Diodes

T-03-09

- BV...45V (FDH900), 35 V (FDH999)
- t_{rr} ...4.0 ns (FDH900), 5.0 ns (FDH999)

ABSOLUTE MAXIMUM RATINGS (Note 1)

Temperatures

Storage Temperature Range
Max. Junction Operating Temperature
Lead Temperature

-65°C to +200°C
+175°C
+260°C

Power Dissipation (Note 2)

Maximum Total Dissipation at 25°C Ambient
Linear Derating Factor (From 25°C)

500 mW
3.3 mW/°C.

Maximum Voltage and Currents

WIV Working Inverse Voltage FDH900
FDH999

40 V
25 V

I_O Average Rectified Current
 I_F Continuous Forward Current
 I_f Recurrent Peak Forward Current
 $I_f(\text{surge})$ Peak Forward Surge Current
Pulse Width = 1.0 s
Pulse Width = 1.0 μ s

200 mA
500 mA
600 mA
1.0 A
4.0 A

PACKAGES

FDH900 DO-35
FDH999 DO-35
FDLL900 LL-34
FDLL999 LL-34

If you need this device in the SOT package, an electrical equivalent is available. See FDSO1200 family.

ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	FDH900		FDH999		UNITS	TEST CONDITIONS
		MIN	MAX	MIN	MAX		
BV	Breakdown Voltage	45		35		V	$I_R = 5.0 \mu A$
I_R	Reverse Current		500		1.0	μA nA	$V_R = 25 V$ $V_R = 40 V$
V_F	Forward Voltage		1.0		1.0	V V	$I_F = 10 mA$ $I_F = 100 mA$
C	Capacitance		3.0		5.0	pF	$V_R = 0, f = 1.0 MHz$
t_{rr}	Reverse Recovery Time		4.0		5.0	ns	$I_F = 10 mA, I_R = 10 mA,$ $R_L = 100 \Omega, I_{rr} = 1.0 mA$

NOTES:

1. These ratings are limiting values above which the serviceability of any individual semiconductor device may be impaired.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty-cycle operation.
3. For product family characteristic curves, refer to Chapter 4, D4.